

ISOPROPYL ALCOHOL ANHYD 99.7% VWR *DPM530*

REVISION OF: 07-21-87

SHIP TO:

51062581
MC DONNELL DOUGLAS CORP
DOUGLAS AIRCRAFT DIV
2900 E COVER
LONG BEACH CA 90801
ATTN: JOE VALARIE

ORDER NO: 519530482
PROD NO: 04326702

VAN WATERS & ROGERS INC. 1600 NORTON BLDG. SEATTLE, WA 98104-1564

-----EMERGENCY ASSISTANCE-----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL CHEMTREC
(800) 424-9300.

-----FOR PRODUCT AND SALES INFORMATION-----

CONTACT YOUR LOCAL VAN WATERS & ROGERS BRANCH OFFICE

-----PRODUCT IDENTIFICATION-----

PRODUCT NAME: ISOPROPYL ALCOHOL
COMMON NAMES/SYNONYMS: ISOPROPANOL;
-PROPANOL; DIMETHYL CARBINOL; IPA

CAS NO.: 67-63-0
VW&R CODE: T1238

FORMULA: C3 H8 O
HAZARD RATING (NFPA 704)
HEALTH: 1
FIRE: 3
REACTIVITY: 0
SPECIAL: NONE

DATE ISSUED: 08/87
SUPERCEDES: 06/86
HAZARD RATING SCALE:
0=MINIMAL 3=SERIOUS
1=SLIGHT 4=SEVERE
2=MODERATE

-----HAZARDOUS INGREDIENTS-----

COMPONENT	%	EXPOSURE LIMITS, PPM			HAZARD
		OSHA PEL	ACGIH TLV	OTHER LIMIT	
ISOPROPYL ALCOHOL	>99	400	400	500	FLAMMABLE
(ACGIH STEL)					

-----PHYSICAL PROPERTIES-----

BOILING POINT, DEG F: 181 VAPOR PRESSURE, MM HG/20 DEG C: 33
MELTING POINT, DEG F: -127 VAPOR DENSITY (AIR=1): 2.07
SPECIFIC GRAVITY (WATER=1): 0.79 WATER SOLUBILITY, %: 100
APPEARANCE AND ODOR: CLEAR, EVAPORATION RATE (BUTYL ACETATE=1): 3
COLORLESS LIQUID; MEDICINAL ALCOHOLIC ODOR

-----FIRST AID MEASURES-----

IF INHALED: REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF EYE CONTACT: IMMEDIATELY FLUSH EYES WITH LOTS OF RUNNING WATER FOR 15 MINUTES, LIFTING THE UPPER AND LOWER EYELIDS OCCASIONALLY. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF SKIN CONTACT: IMMEDIATELY WASH SKIN WITH LOTS OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES; WASH BEFORE REUSE. GET MEDICAL ATTENTION IF IRRITATION PERSISTS AFTER WASHING.

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IF SWALLOWED: IF CONSCIOUS, IMMEDIATELY INDUCE VOMITING BY GIVING 2 GLASSES OF WATER AND STICKING A FINGER DOWN THE THROAT. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON. KEEP THE VICTIM'S HEAD BELOW HIS HIPS WHILE VOMITING SO HE DOES NOT BREATHE THE VOMITUS INTO HIS LUNGS.

-----HEALTH HAZARD INFORMATION-----

PRIMARY ROUTES OF EXPOSURE: SKIN OR EYE CONTACT, INHALATION, SWALLOWED
SIGNS AND SYMPTOMS OF EXPOSURE

INHALATION: VAPORS AND MISTS IRRITATE THE NOSE AND THROAT. INHALATION OF HIGHER CONCENTRATIONS MAY CAUSE HEADACHES, VOMITING, AND COMA. INHALATION OF VERY HIGH CONCENTRATIONS OR PROLONGED EXPOSURE MAY CAUSE UNCONSCIOUSNESS OR DEATH.

EYE CONTACT: VAPORS WILL IRRITATE THE EYES. LIQUID AND MISTS CAN SEVERELY IRRITATE OR DAMAGE THE EYES AND CAUSE CORNEAL BURNS.

SKIN CONTACT: BRIEF CONTACT MAY DRY THE SKIN, OR CAUSE BURNING OR STINGING SENSATION. PROLONGED OR REPEATED CONTACT MAY IRRITATE THE SKIN, CAUSING DERMATITIS.

SWALLOWED: SWALLOWING LARGE QUANTITIES CAUSES HEADACHES, NAUSEA, VOMITING, STOMACH CRAMPS AND DIARRHEA, AND PERHAPS UNCONSCIOUSNESS, OR DEATH.

CHRONIC EFFECTS OF EXPOSURE: PROLONGED OR REPEATED EXPOSURE TO HIGH CONCENTRATIONS CAN PRODUCE SEVERE OR FATAL CNS DEPRESSION.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: PERSONS WITH PRE-EXISTING SKIN DISORDERS, EYE PROBLEMS, OR IMPAIRED RESPIRATORY FUNCTION MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS SUBSTANCE.

-----TOXICITY DATA-----

ORAL: RAT LD50 = 5840 MG/KG; HUMAN LETHAL DOSE = 250 ML

DERMAL: RABBIT LD50 = 13 GM/KG

INHALATION: RAT LC50 = 16,000 PPM/8 HR

CARCINOGENICITY: THIS MATERIAL IS NOT CONSIDERED TO BE A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

OTHER DATA: NONE

-----PERSONAL PROTECTION-----

VENTILATION: LOCAL MECHANICAL EXHAUST VENTILATION CAPABLE OF MAINTAINING EMISSIONS AT THE POINT OF USE BELOW THE PEL.

RESPIRATORY PROTECTION: IF USE CONDITIONS GENERATE VAPORS OR MISTS, WEAR A NIOSH-APPROVED RESPIRATOR APPROPRIATE FOR THOSE EMISSION LEVELS. APPROPRIATE RESPIRATORS MAY BE A FULL FACEPIECE OR A HALF MASK AIR-PURIFYING CARTRIDGE RESPIRATOR EQUIPPED FOR ORGANIC VAPORS/MISTS, A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE, OR A SUPPLIED-AIR RESPIRATOR.

EYE PROTECTION: CHEMICAL GOGGLES UNLESS A FULL FACEPIECE RESPIRATOR IS ALSO WORN. IT IS GENERALLY RECOGNIZED THAT CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH CHEMICALS BECAUSE CONTACT LENSES MAY CONTRIBUTE TO THE SEVERITY OF AN EYE INJURY.

PROTECTIVE CLOTHING: LONG-SLEEVED SHIRT, TROUSERS, SAFETY SHOES, RUBBER GLOVES, AND RUBBER APRON.

OTHER PROTECTIVE MEASURES: AN EYEWASH AND SAFETY SHOWER SHOULD BE NEARBY AND READY FOR USE.

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-----FIRE AND EXPLOSION INFORMATION-----

FLASH POINT, DEG F: 53

FLAMMABLE LIMITS IN AIR, %

METHOD USED: TCC

LOWER: 2

UPPER: 12.7

EXTINGUISHING MEDIA: USE WATER SPRAY, DRY CHEMICAL, CO2, OR ALCOHOLIC FOAM. DO NOT USE A DIRECT WATER STREAM.

SPECIAL FIRE FIGHTING PROCEDURES: FIRE FIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. USE WATER SPRAY TO COOL NEARBY CONTAINERS AND STRUCTURES EXPOSED TO FIRE.

UNUSUAL FIRE AND EXPLOSION HAZARDS: EXTINGUISH ALL NEARBY SOURCES OF IGNITION BECAUSE VAPORS MAY BE MOVED BY AIR CURRENTS TO IGNITION SOURCES DISTANT FROM THE HANDLING POINT.

-----HAZARDOUS REACTIVITY-----

STABILITY: STABLE

POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: HEAT, SPARKS, AND OPEN FLAMES.

MATERIALS TO AVOID: STRONG OXIDIZERS, ALUMINUM, ACETALDEHYDE, CHLORINE, ETHYLENE OXIDE, HYDROGEN-PALLADIUM COMBINATION, H2 O2-H2 SO4 COMBINATION, HYPOCHLOROUS ACID, ISOCYANATES, NITROFORM, PHOSGENE, OLEUM, PERCHLORIC ACID, POTASSIUM T-BUTOXIDE, ACIDS, ALKALIS, AMINES, HALOGENS, HALOGEN COMPOUNDS, ANHYDRIDES, AND ALDEHYDES.

HAZARDOUS DECOMPOSITION PRODUCTS: MAY LIBERATE CARBON MONOXIDE OR CARBON DIOXIDE.

-----SPILL, LEAK, AND DISPOSAL PROCEDURES-----

ACTION TO TAKE FOR SPILLS OR LEAKS: WEAR PROTECTIVE EQUIPMENT INCLUDING RUBBER BOOTS, RUBBER GLOVES, RUBBER APRON, AND A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE OR A SUPPLIED-AIR RESPIRATOR. IF THE SPILL OR LEAK IS SMALL, A FULL FACEPIECE AIR-PURIFYING CARTRIDGE RESPIRATOR EQUIPPED FOR ORGANIC VAPORS MAY BE SATISFACTORY. IN ANY EVENT, ALWAYS WEAR EYE PROTECTION. EXTINGUISH ALL IGNITION SOURCES AND ENSURE THAT ALL HANDLING EQUIPMENT IS ELECTRICALLY GROUNDED. FOR SMALL SPILLS OR DRIPS, MOP OR WIPE UP AND DISPOSE OF IN DOT-APPROVED WASTE CONTAINERS. FOR LARGE SPILLS, CONTAIN BY DIKING WITH SOIL OR OTHER NON-COMBUSTIBLE ABSORBENT MATERIALS AND THEN PUMP INTO DOT-APPROVED WASTE CONTAINERS; OR ABSORB WITH NON-COMBUSTIBLE SORBENT MATERIAL. PLACE RESIDUE IN DOT-APPROVED WASTE CONTAINERS. KEEP OUT OF SEWERS, STORM DRAINS, SURFACE WATERS, AND SOIL. COMPLY WITH ALL APPLICABLE GOVERNMENTAL REGULATIONS ON SPILL REPORTING, AND HANDLING AND DISPOSAL OF WASTE.

DISPOSAL METHODS: DISPOSE OF CONTAMINATED PRODUCT AND MATERIALS USED IN CLEANING UP SPILLS OR LEAKS IN A MANNER APPROVED FOR THIS MATERIAL. CONSULT APPROPRIATE FEDERAL, STATE AND LOCAL REGULATORY AGENCIES TO ASCERTAIN PROPER DISPOSAL PROCEDURES.

NOTE: EMPTY CONTAINERS CAN HAVE RESIDUES, GASES AND MISTS AND ARE SUBJECT TO PROPER WASTE DISPOSAL, AS ABOVE.

-----SPECIAL PRECAUTIONS-----

HANDLING AND STORAGE PRECAUTIONS: KEEP AWAY FROM HEAT, SPARKS, AND FLAMES. STORE IN A COOL, DRY, WELL-VENTILATED PLACE AWAY FROM INCOMPATIBLE MATERIALS. VENT CONTAINER FREQUENTLY, AND MORE OFTEN IN WARM WEATHER, TO RELIEVE PRESSURE. ELECTRICALLY GROUND ALL EQUIPMENT WHEN HANDLING THIS PRODUCT AND USE ONLY NON-SPARKING TOOLS. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. DO NOT USE PRESSURE TO EMPTY CONTAINER. WASH THOROUGHLY AFTER HANDLING. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

REPAIR AND MAINTENANCE PRECAUTIONS: DO NOT CUT, GRIND, WELD, OR DRILL IN OR NEAR THIS CONTAINER.

OTHER PRECAUTIONS: CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, WILL RETAIN PRODUCT RESIDUE AND VAPORS. ALWAYS OBEY HAZARD WARNINGS AND HANDLE EMPTY CONTAINERS AS IF THEY WERE FULL.

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-----FOR ADDITIONAL INFORMATION-----

CONTACT DOUGLAS EISNER, TECHNICAL DIRECTOR, VAN WATERS & ROGERS INC.
DURING BUSINESS HOURS, PACIFIC TIME (206)447-5911

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PROCESS.

-----REVISION-----

08/87: REPORTED ADDITIONAL PERSONAL EXPOSURE LIMIT.

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